

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF WISCONSIN

UNITED STATES OF AMERICA,

Plaintiff,

v.

Case No. 10-C-910

NCR CORPORATION, et al.,

Defendants.

DECISION AND ORDER

Following remand of this case from the Court of Appeals, the United States has filed a motion seeking additional findings of fact based on the record made at the December 2012 trial conducted in this action that would reaffirm the court's original conclusion that the harm to OU4 is not divisible and that NCR is jointly and severally liable. In the government's view, there is enough evidence already in the record to answer two of the key questions highlighted by the Seventh Circuit in its decision remanding the case. If this court agrees with the government's interpretation of the evidence, the matter may be resolved without the need for further proceedings. Based upon the analysis adopted by the Seventh Circuit, however, and the evidence presented at trial, I am unable to make the findings the government requests. Instead, I find that NCR has established its divisibility defense. The government's motion will therefore be denied and NCR's cross-motion will be granted.

I. The Trial and the Seventh Circuit's Decision

On September 25, 2014, the Seventh Circuit affirmed parts of this court's post-trial decision but reversed and remanded as to others. As relevant here, that decision directed this court "to reconsider NCR's divisibility defense consistent with this opinion." *United States v. P.H. Glatfelter Co., et al.*, 768 F.3d 662, 682 (7th Cir. 2014). As all of the parties are by now well-aware, the divisibility defense has two components. The first question asks whether the harm is theoretically capable of being divided, while the second asks whether there is a reasonable way of apportioning the damages. *Id.* at 838.

At trial and in earlier proceedings, the parties, their experts, and the court all viewed the evidence through the prevailing "binary" lenses that then governed the divisibility analysis. In attempting to answer the first of the two divisibility questions, the issue was not how much each PRP contributed to the concentrations, or toxicity, in OU4, but how much their discharges gave rise to the need to remediate portions of that river section. Each portion of the river either needed to be remediated, or it did not; that was why the parties and courts addressing this issue have described the question as binary. In short, the remedy imposed and its attendant costs were the touchstone of the entire analysis of harm. For example, I described the efforts of NCR's expert, Mr. Butler, as follows:

Butler went about determining which remedial actions, if any, would need to be applied to different parts of the river, which he had conceptually divided up into polygons. For instance, if a certain polygon would have a concentration lower than 1 ppm if NCR were the only discharger, he could determine that that polygon would not need to be dredged or remediated at all. In other cases, a polygon that otherwise needed to be dredged might have been a candidate for capping (a cheaper remedy) had NCR been the only polluter. Thus, Butler's analysis determines areas that would not need to be remediated at all in the NCR-only scenario, as well as areas for which different remedies could be applied.

United States v. NCR Corp., 960 F.Supp.2d 793, 809 (E.D. Wis. 2013).

Based on the fuller record now before it following a bench trial, the Seventh Circuit altered the prevailing “binary” paradigm and, in essence, directed the parties and this Court to view the question of divisibility through a different set of lenses. It did so by re-defining the very harm that NCR’s defense attempts to divide. No longer is the “harm” to be viewed primarily with respect to the remedy or costs the PCBs might have triggered; instead, the harm is primarily defined with respect to the PCBs’ actual toxicity, i.e., the “harm to human health and the environment.” *Id.* at 677. The Seventh Circuit found that this harm is not binary but “continuous,” because the harm increases in rough proportion to the concentration of PCBs in the water (particularly nearer the surface). Simply put, the more PCBs, the more harm. Thus, the harm is more properly defined as a release’s toxicity or danger to health and the environment, as opposed to the release’s propensity to trigger a costly remedy.¹

In many ways this analysis should be much easier because it removes the somewhat cumbersome link between discharges, remediation rules and cost. If harm is essentially toxicity, we no longer need to assess whether given discharges would have given rise to the need for a specific remedy in a portion of the river. Instead, the primary question as to whether the harm is theoretically capable of being divided is now simply this: to what extent did NCR contribute to the contamination, or toxicity, in OU4? “We think the harm would be theoretically capable of apportionment if NCR could show the extent to which it contributed to PCB concentrations in OU4.” *Id.* at 678. As for the second question in the divisibility analysis, the Seventh Circuit

¹Although the harm is the contamination, the Seventh Circuit suggested that the “damages” to be apportioned would be linked to each party’s causation of remedial response costs.

concluded that if in fact NCR could show the extent to which it contributed to PCB concentrations in OU4, then “a reasonable basis for apportionment could be found in the remediation costs necessitated by each party.” *Id.*

II. Theoretical Divisibility

The question posed by the government’s motion is whether the record as it now stands provides enough evidence for this court to rule on the two divisibility questions. The government focuses on the Seventh Circuit’s brief discussion of several experts, who were key to its defense:

The district court thoroughly critiqued the mass-percentage estimates provided by Simon and Dr. Connolly, and we agree that those estimates likely understated NCR's contribution to the PCBs in OU4. However, Butler also ran his analysis using the higher estimates provided by Georgia-Pacific's expert, Dr. John Wolfe. The district court failed to explain why Dr. Wolfe's mass-percentage estimates were unreliable. Moreover, apart from its assumption that the PCB contamination in the Lower Fox River is binary in nature, the district court levied no criticism at Butler's application of the mass-percentage estimates he used. There may be reasons to find that Dr. Wolfe's mass-percentage estimates are unreliable, and there may be reasons to find that Butler's use of those estimates was unsound, but we will not undertake such factfinding in the first instance. Therefore, we will reverse the district court's decision on NCR's divisibility defense and remand for further proceedings.

768 F.3d at 678.

The reason this court did not explain why the higher mass-percentage estimates referenced by Dr. Wolfe were unreliable, however, was because if the harm was binary in nature, it did not matter. In other words, if the harm at issue was the cost of remediation of those areas in which the PCB contamination was above the remedial action level of 1.0 ppm and we assume the higher estimates of NCR’s PCB contamination used by Dr. Wolfe are accurate, the required remedy would be roughly the same even if NCR was the only source. (ECF No. 729 at 2188-89.) Given the

relatively low remedial action level of 1.0 ppm, the court concluded that only if the volume of PCB discharge attributable to NCR was extremely low, far lower than the estimates used by Dr. Wolfe, would NCR be able to show that its discharges were not a sufficient or at least necessary cause of all or most of the remediation required in OU4. 960 F. Supp.2d at 826, n 9.

This understanding of the harm at issue was also the basis for this court's rejection of Dr. Butler's conclusion that the harm was divisible even assuming the larger estimate of NCR's PCB discharge utilized by Dr. Wolfe. The court explained in detail why it concluded that Dr. Butler's testimony that "(1) NCR's discharges alone produced concentrations below the 1.0 ppm remedial action level; and (2) the concentration actually exceeded 1.0 ppm, due either to the other parties' discharges or to a combination of their discharges with NCR'swas limited and unconvincing." 960 F. Supp.2d at 811. If, as the Court of Appeals has now held, the harm is to be viewed as continuous, as opposed to binary, this court's criticism of Dr. Butler's approach drops out and Dr. Wolfe's estimates become relevant.

It appears from the Seventh Circuit's decision that its discussion of this evidence was directed more towards the second divisibility question (apportionment of damages) than the primary question, which asks whether the harm is *theoretically* capable of division. In fact, as NCR points out, the government seemed to have conceded as much during a December 2014 hearing, when its attorney suggested that "the only remaining issue" is whether NCR can satisfy "step two" and demonstrate an apportionment that "makes sense." (ECF No. 960 at 7.) The government insists that it has not conceded theoretical divisibility, but its briefs have addressed only the apportionment question.

Whether or not the government actually conceded theoretical divisibility, I conclude that the

Seventh Circuit's decision means, on this record, that the harm *is* theoretically capable of apportionment. In short, the Seventh Circuit's definition of "harm" opens the door to a simple volumetric approach to divisibility, and Dr. Wolfe's evidence, as applied by Mr. Butler, suffices to support such an approach.²

In the government's view, because Dr. Wolfe himself admitted that his own estimates should not be grounds for a divisibility analysis, NCR necessarily loses on its defense. From Wolfe's point of view, things were just too uncertain to rely on a modeling approach to determine divisibility. Therefore, according to the government, there would be no sound basis for Mr. Butler to have used Dr. Wolfe's own estimates, and thus there is no sound basis to find divisibility. But Dr. Wolfe's ultimate conclusion that the harm was not divisible also rests on the assumption that the harm was binary in nature and that, with a remedial action level of only 1.0 ppm, the remedy would be approximately the same even if NCR was the only discharger. (ECF No. 729 at 2188-89.) Again, this is the view that the Seventh Circuit rejected. Now that the harm is seen as continuous, it is much simpler to conclude that the harm may theoretically be divided. NCR no longer needs to show how its PCBs contributed to the need to remedy any given portion of the river—an undertaking requiring detailed modeling. Instead, it is enough to demonstrate what percentage of the toxicity in OU4 was caused by its discharges.

The question, therefore, is whether Dr. Wolfe's mass-percentage estimates are reliable. NCR observes that the government ceded two hours of its time to Georgia-Pacific to allow Wolfe

²I do not mean volumetric in the sense of dividing harm by how much toxin each party released. Instead, the analysis here examines how much of each party's release *stayed* in OU4. This requires evidence about the numerous factors that cause particles to embed in the bottom of a river.

to testify during the trial (ECF No. 729 at 2264), and it is thus unusual that it is now backing away from the very expert whose testimony it earlier seemed very willing to endorse. The United States points out that Wolfe played a somewhat limited role in the trial, however. He submitted an expert rebuttal report on behalf of Georgia-Pacific, a discharger in OU4B (near the mouth of the River) whose natural motivation was to lay most of the blame for the PCBs in OU4 at the feet of the PRPs upstream, primarily NCR and Glatfelter. As a rebuttal witness, his role was primarily to question the assessments of NCR's experts. And Wolfe himself noted that his estimates were subject to multiple uncertainties.

NCR decided to use Wolfe's own estimates, however, in an effort to show that even if it used its adversary's own data, which of course was quite unfavorable to NCR, the harm in OU4 was *still* divisible. This approach perhaps came as something of an afterthought, as the government points out. On the eve of trial, Mr. Butler served a supplemental expert report in which he incorporated some of Wolfe's estimates. But Butler believed Wolfe's estimates had not involved the entirety of OU4 but merely its lower half, and so Butler made his own projections about what Wolfe would have concluded about OU4A. Then, on cross-examination, Butler learned that Wolfe *had* actually made estimates for OU4A, which blamed NCR for 43% of the PCBs in OU4A. Armed with this knowledge, Butler then testified in surrebuttal, incorporating Wolfe's 43% figure for OU4A and his 27% figure for OU4B. (Actually Wolfe had lumped together NCR and CBC Coating, a smaller discharger also in OU2.)

It is true that Wolfe's estimates are subject to multiple uncertainties, including assumptions about releases, dredging and the like. But those are uncertainties that essentially go with the territory. In rejecting NCR's modeling experts' conclusions, for example, my analysis was driven

primarily by the unreliability of the *inputs* to their framework, most particularly the lowball assumptions about PCB discharges used by NCR's expert, Mr. Braithwaite. (ECF No. 794 at 32.) I noted problems inherent in Dr. Jones' modeling technique, but did not find such problems to be a critical flaw. (*Id.* at 44.) The point is that the modeling of OU4 was not the key problem, for NCR or anyone else, and the uncertainties identified by Dr. Wolfe were, by their nature, the kinds of issues that would bedevil the divisibility question in *any* river with multiple PRPs and an imperfect historical record.

More importantly, any uncertainty about Dr. Wolfe's analysis is lessened now that the definition of harm has been de-linked from the remedial rules. Wolfe's earlier belief that things were too uncertain and complicated is not particularly surprising, given the difficulty inherent in attempting to link PCB discharges to remedial action and costs, etc. Under that framework, it was important to be able to identify how each party's discharges gave rise to remedial action, and that analysis was driven by whether NCR's discharges pushed each subsection of the river past the 1.0 ppm remedial action threshold. Modeling was paramount. That analysis was much more complicated than one based simply on identifying how much NCR's discharges contributed to the contamination in OU4, *without respect* to the remedy imposed or the 1.0 ppm threshold. The playing field now is different. Even if Wolfe's model was not "designed" to be used for divisibility or apportionment under the old framework, the new paradigm demands much less from an expert. Now, it would be enough if Wolfe were able to provide reasonable estimates as to how much of NCR's discharges contributed to the contamination in OU4. Such an estimate would suffice, on its own, to answer the first question, namely, whether the harm is theoretically capable of apportionment. "We think the harm would be theoretically capable of apportionment if NCR could

show the extent to which it contributed to PCB concentrations in OU4.” 768 F.3d at 678.

The government’s strongest objection is that Butler really didn’t do anything else once he adopted Wolfe’s estimates. Recall that part of Butler’s primary analysis (using NCR’s other experts) involved calculating PCB concentrations on a cell-by-cell basis based on the 1600 core samples from OU4. He did this because the “harm” was defined with respect to the remedy, and the remedy varied based on the location of the contamination. But in doing so, Butler was relying heavily on NCR’s other experts, *not* Wolfe, in linking the PCBs to the remedy and costs for each subsection of the river. In contrast, in using Dr. Wolfe’s estimates, Butler simply applied Wolfe’s percentages (e.g., 43%) to the known concentrations in all the core samples for each half of the river. For example, if a given core had a concentration of 35 ppm, the NCR’s share of that contamination would be about 15 ppm, or 43%. Thus, rather than the location-specific analysis he undertook with respect to all of the different locations in the river, all of which have different concentrations, Butler simply assumed that if NCR contributed 43% of the PCBs to OU4A, then it also caused 43% of the concentration, or “harm” to that half of the river as well.

The government argues that doesn’t cut it because it is well-established that different portions of the river had different concentrations attributable to OU2 sources. For example, areas near the De Pere Dam have been shown to be the product largely of OU2 sources. Taking a “one size fits all” approach to an entire half of the river will obscure the differences in concentrations in different areas of the river. As the government puts it, “Butler obtained no reliable information about the actual contributions to the PCB contamination in hundreds of different river locations when he multiplied Dr. Wolfe’s percentages by the PCB concentrations found in hundreds of sediment core samples.” (ECF No. 980 at 20.) But even if Butler’s analysis might underestimate

NCR's contributions in certain sub-areas of OU4, that means Butler's analysis would *over-estimate* NCR's contribution to the contamination in other areas of the river. After all, the 43% figure (for example), is an *average* of NCR's contribution to PCBs that remain in the first half of OU4, and so an understatement in one portion of the river would have to be balanced by overstatements elsewhere.

It is worth examining why Dr. Wolfe believed that there was too much uncertainty and that the river could not be subject to divisibility. Much of his uncertainty was due to the difficulty in mapping which PCBs deposited in different subsections of the river.

Q. [. . .] because of those uncertainties can modeling be done in the Fox River to determine precisely where PCBs came from that are now located in OU4?

A. No. In my opinion, this uncertainty makes it impossible to do that precisely.

Q. And because of these uncertainties, Dr. Wolfe, do you think that the Fox River modeling is a reliable scientific method for dividing or apportioning a river?

A. No, I don't think so.

(ECF No. 729 at 2198.)

In short, much of Dr. Wolfe's testimony was based on the notion that it was too difficult to "determine precisely where PCBs came from that are now located in OU4." (*Id.*) And he "never intended to put it forth as precise estimates to be used for an apportionment process." (*Id.* at 2224.) In fact, Wolfe testified that "the challenge of using a modeling approach to answer this question is too great." (*Id.* at 2226.)

Dr. Wolfe thus believed that not only was his model not up to the task, but that modeling *in general* could not answer the important questions at hand. But those questions have changed. The new definition of harm no longer requires (if it ever did) the "precise" polygon-by-polygon

approach that was used by NCR under the earlier remedy-based definition of harm. Wolfe was essentially rebutting an analysis that is no longer relevant, i.e. the notion that the remedy dictates the definition of harm. Having found that the harm was contamination and that it was continuous, the Seventh Circuit recognized that each additional quantity of PCBs caused a roughly correlated additional amount of danger to human health and the environment. Given this more abstract definition of harm, it is enough that a party can demonstrate a reasonable correlation between the volume of PCBs it is responsible for and the concentrations present in the river. Wolfe did this. In his cross-examination, he conceded that he relied on a well-recognized framework, called WASP, for his model. (ECF No. 729 at 2263.) He admitted that the purpose of his model was to produce the best estimates of loads, in connection with 2006 settlement discussions. (*Id.* at 2264-65.) Repeatedly, he was asked if his results were his “best estimates” of the PCB loads of various parties, and he agreed. (*Id.*)

Q. And so the net result of your expert modeling work is that ballpark three-quarters of the PCBs that polluted OU4B were discharged not by NCR but by other parties, right?

A. Well, I would agree, and I would emphasize the word “ballpark.” I’ve spoken about the high degree of uncertainty in those estimates.

Q. Ballpark, that sounds right.

A. Well, it’s an accurate reading of the estimates I provided.

(*Id.* at 2267-68.)

Thus, what’s clear is that although Wolfe believed the divisibility question was too difficult under the old, binary, framework, he never backed away from his “best estimates” of each party’s PCB loads, and that is what is currently at issue. The government essentially relies on Wolfe’s

uncertainties about a question that no longer matters, while ignoring his relative confidence in the load estimates he reached, which certainly matter. The inescapable point is that Wolfe conceded that “ballpark” NCR was responsible for only about a quarter of the PCBs in OU4B, and somewhat more in OU4A.

Here, Butler simply used Wolfe’s estimates and applied those percentages across the board to the concentrations found in the core samples. No doubt some of the PCBs from NCR’s plant were more concentrated near the surface, while others were buried deeper below, due to the vagaries of the Fox River, which all agree is not materially different from any other river. The government might have a better argument if there were evidence that PCBs coming from NCR’s plant somehow had a systematically greater propensity to remain in higher concentrations near the surface throughout OU4, which would make them more toxic than the basic volumetric analysis would suggest. But there was no such evidence, and none is imaginable. In fact, the government’s evidence regarding bioturbation, dredging, the seiche effect, and the like, tended to show that all the PCBs from upstream sources are mixed together and may, in the aggregate, be viewed as fungible. That is, once they deposited in the river bed, there is no reason to believe that NCR’s PCBs somehow behaved any differently than the PCBs from Glatfelter, U.S. Paper, CBC Coating, or other dischargers. Thus, if NCR is responsible for 43% of the PCBs that settled in OU4A, then it is reasonable to believe that it is also responsible for about 43% of the *concentration* of PCBs in OU4A, and that is all NCR must show in order to establish theoretical divisibility.

In sum, even if NCR’s own experts were unconvincing on the question of the volumetric amount of PCBs NCR contributed to OU4, the evidence submitted by NCR’s adversary set an outer limit of how much contamination can be attributed to NCR. Importantly, no one has even attempted

to argue that NCR's contributions to the contamination in OU4 were materially *more* than the estimates Dr. Wolfe himself used. Thus, NCR has shown that, at worst, it is responsible for roughly one-third of the PCBs that settled in OU4. Because the "harm" in OU4 is defined with respect to the concentration of PCBs, and because NCR's discharges (on average) produced concentrations in the same fashion as other dischargers, the volumetric estimates shown by Dr. Wolfe and applied by Mr. Butler sufficiently establish "the extent to which [NCR] contributed to PCB concentrations in OU4." 768 F.3d at 678. The harm is therefore theoretically divisible.

III. Reasonable Basis for Apportionment

The second question is whether there exists a reasonable basis for apportionment in the "remediation costs necessitated by" NCR. *Id.* NCR's task, therefore, is to demonstrate a reasonable estimate of the extent to which its contribution to the contamination in OU4 gave rise to the remediation costs incurred. (As discussed further below, because costs are correlated with harm, the analysis is somewhat similar.)

NCR relies on the fifth step of Butler's analysis. In calculating NCR's share of the total OU4 remediation costs, Butler apportioned liability based on the ratio between each PRP's stand-alone cost and the total of all the parties' stand-alone costs. Butler testified that he had used this stand-alone cost method some fifteen or twenty times since the early 1990s. He explained the method as follows:

the stand-alone cost analysis looks at what would be the cost if only one party's waste or contributions were at a site. And you then estimate the cost for each – for that party, and then you do that for each party so that you get a stand-alone cost that is assignable – attributable to each party. And on the basis of those stand-alone costs, you can then come up with a reasonable method for apportioning the costs.

(ECF No. 726 at 1368.)

This approach assumes that the pollution is cleaned up in a joint project among various polluters, whose combined efforts produce cost savings. For example, if three polluters would have incurred \$200 million cleaning up their pollution independently of each other, they might be able to do the project together for only \$120 million. Thus, under this approach, each polluter shares in the benefits of group cost savings in proportion to its own stand-alone costs.

The government's principal objection to this approach is that it is based on averages of contamination over broad areas (OU4A and B) when what really matters is "variability in the individual data points." (ECF No. 980 at 21.) After all, the remedy is not being imposed with respect to "OU4A" or "OU4B"—the most detail found in Butler's analysis—but in multiple subsections of the river. Each PRP contributed different amounts to those subsections, and thus caused different kinds of remedies (or no remedy at all), and so (the government argues) it would not make sense to use averages to apportion the costs. For example, it is well accepted that most of the PCB concentrations directly adjacent to Georgia-Pacific's plant in OU4B came from Georgia-Pacific itself. It would therefore not make sense to attribute to *NCR* a stand-alone cost for remediating that subsection because Butler's estimates are an average for the entirety of OU4B. Given that discharges from Georgia-Pacific's plant are largely to blame for the toxicity at that location, such an approach would overestimate *NCR*'s contribution to the remedial costs in that section. (The flip side is that the using the averages would *underestimate* *NCR*'s contribution to costs elsewhere in the river, where its own PCBs might predominate.)

There are at least two problems with the government's argument. First, the Seventh Circuit found, contrary to this court's earlier conclusion, that not only was the harm continuous, but the cleanup costs were continuous as well. That is, it concluded that cleaning up a given portion of the

river becomes more expensive the more toxic that portion is. 768 F.3d at 277. If costs are correlated to contamination (harm), then one would expect the costs may be apportioned on roughly the same lines as the harm itself: the more harm each party causes, the more cost he is responsible for. That means the analysis is much simpler, a point made by *Burlington Northern* itself. There, for example, the district court concluded that the railroads were responsible for 6% of the contamination and therefore 6% of the remediation costs. There was no discussion of relationships between harm and remediation costs, part-per-million thresholds, “variability in the individual data points,” or anything akin to the kind of detail the government now presses for. In defining harm as contamination and equating remediation costs with the amount of contamination, the *Burlington Northern* approach appears to be what the Court of Appeals has directed be used here. If that is true, then none of the criticisms of Dr. Wolfe are very persuasive because only the most basic modeling would be required to establish how much PCB remained in OU4. As discussed above, Wolfe’s estimates were at the high end of what was reasonable to attribute to NCR, and no expert or party has argued that NCR’s discharges were materially greater. Accordingly, absent compelling evidence to the contrary, if NCR contributed to 27-43% of the harm in OU4, it also contributed roughly the same amount to the cleanup cost.

Just as importantly, it is reasonableness, not scientific precision, that governs the apportionment analysis. This court has already noted that *Burlington Northern* seemed to lower the bar for what kind of evidence would be acceptable for a PRP to establish apportionment. In that case, it was clear to all concerned that the size of the leased parcel and the amount of time the PRP had controlled it were not *necessarily* linked to the amount of harm or damages. Instead, those metrics were just rough proxies the district court used in the absence of actual knowledge, an

absence of information caused by the fact that the railroads did not even *argue* divisibility. By comparison, in this case we have scientific estimates from an expert whose experience and qualifications are unimpeachable and who had no motive to understate NCR's contribution. Unlike *Burlington Northern*, where a fifty-percent "margin of error" was applied, here we can say with reasonable certainty that NCR is responsible for somewhere between twenty and forty percent of the PCBs remaining in OU4 (prior to remediation), and that its stand-alone cost for remediation falls somewhere in that range as well. NCR's proposal of a 28-percent share falls solidly in the center of the range of reasonableness.

The government is correct that nothing in *Burlington Northern* suggests that the district court's approach in that case was a paragon of apportionment. It is also possible to read the decision narrowly in light of the fact that the level of review was limited to whether the court had abused its discretion. But nowhere did the Supreme Court, which was unanimous, express skepticism about the district court's approach; and nowhere in the opinion does one get a sense that the Court would have done it differently had it been asked to apportion the harm in the first instance. More importantly, I am bound by the decision of the Court of Appeals, which states that if NCR could show the extent to which it contributed to PCB concentrations in OU4, "a reasonable basis for apportionment could be found in the remediation costs necessitated by each party." 768 F.3d at 678. Thus, I conclude that the apportionment here would easily pass muster under the Supreme Court's *Burlington Northern* analysis, and complies with the mandate of the Seventh Circuit. As a high estimate, NCR is responsible for 43% of the PCBs in the upper half of OU4 and 27% in the lower half. It requires no stretch of science or logic to conclude that NCR would also be responsible for a similar amount of the cleanup costs.

As I noted above, no one has plausibly argued that NCR contributed significantly more to the PCB problem than Wolfe estimated. Accordingly, when Butler employed Wolfe's estimates, he founded his analysis upon a high estimate for NCR's contributions, which therefore likely overstates NCR's responsibility for response costs in OU4 on the whole. There are clearly areas where using an average would understate NCR's contribution, but there are also areas where it will overstate it (such as hotspots near U.S. Paper and Georgia-Pacific, both significant dischargers). Although an approach based solely on averages for each half of OU4 is not optimal, in a scientific sense, nothing in *Burlington Northern* requires that. And in this case we can expect that the variance in different subsections will not redound to NCR's benefit because, using Wolfe's numbers, NCR started with a worst-case-scenario estimate of its total average contribution to OU4's contamination. In addition, Wolfe's estimates grouped CBC Coating (the other OU2 source) together with NCR. Although CBC was never considered a large discharger, its inclusion also points to an overstatement of NCR's responsibility for the cleanup costs.

Finally, it is also worth noting that no one has objected to the use, in general, of a stand-alone cost method for apportionment. At trial, Dr. Wolfe's sole criticism of Butler's analysis was in Butler's use of the PCB load estimates, i.e., the inputs from other experts that this court and the court of appeals found unconvincing. (ECF No. 729 at 2255.) Butler's reliance on Dr. Wolfe's estimates, rather than NCR's own estimates, solves one of the key problems identified in NCR's approach because it avoids reliance on the PCB discharge estimates that this court found far too low.

III. Conclusion

The government relies largely on the fact that Dr. Wolfe himself testified that his own modeling would not support a divisibility or apportionment determination. But the question now is much simpler than it was at trial, and Dr. Wolfe confirmed on cross-examination that his estimates, which were unfavorable to NCR, were his “best” ones. No other expert has credibly testified that NCR’s contribution to the PCB problem in OU4 was greater than the estimates Dr. Wolfe found. Mr. Butler simply incorporated those estimates into his framework and concluded that 28 percent of the costs of remediation in OU4 are attributable to NCR. Based on the evidence before me and applying the rationale adopted by the Court of Appeals, I find that Butler’s estimate of NCR’s share is reasonably accurate. It follows that NCR has established the harm is theoretically capable of division and that there is also a reasonable basis to apportion its share of the remediation costs of OU4 at 28 percent. NCR has not claimed the harm in OU2, 3 and 5 is divisible, and thus its liability for remediation of those areas is joint and several. NCR discharged no PCBs in OU1, and therefore has no divisible share of the clean-up costs for that area. For these reasons, the government’s motion is **DENIED**. NCR is directed to submit a proposed judgment to the Court within 7 days. The government may respond within 7 days of NCR’s submission.

SO ORDERED this 15th day of May, 2015.

/s William C. Griesbach
William C. Griesbach, Chief Judge
United States District Court